



PCs · NOTEBOOKS · SERVERS

Fujitsu Computers Ltd.  
Mobile Computing Division

## Service Planning Guide

SPG-B-48-158

Issue: 3.0

25 August 1999

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### Service Planning Guide for Lifebook B112

PRODUCTS: Lifebook B112

ENQUIRIES TO: Radu Iancu

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REFERENCE SPG-B-48-158

**This document provides service planning information regarding the release of Lifebook model B112 with 233MHz Intel Pentium processor and Touchscreen technology into the existing range of Fujitsu Computers mobile systems.**

**This document provides information specifically for our Service Partners and System Partners planning purposes. It does not in any way imply that locations world-wide will market the products at the release dates shown.**

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Inquiries to:

MOBILE COMPUTING SUPPORT  
FUJITSU COMPUTERS LTD  
BRACKNELL, BERKSHIRE, UK

Authority:

Ray Malkin  
SUPPORT MANAGER  
FUJITSU COMPUTERS LTD  
BRACKNELL, BERKSHIRE, UK

## 1 OUTLINE DESCRIPTION

### 1.1 Overview

The Fujitsu LifeBook B112 is an A5 size notebook offering Pentium MMX power in only 1.2 kg weight.

The B112 is based on 233 MHz Intel Pentium Processor with MMX Technology and 32 MB SDRAM expandable to 96 MB. It is equipped with 3.2 GB hard disk drive and 8.4" TFT (Thin Film Transistor) SVGA colour LCD panel with Touchscreen technology.

The LifeBook B112 has 512 kB Synchronous Pipeline Burst L2 cache, Intel 430Tx Chip set and NeoMagic video controller with 2 MB EDO DRAM.

This document provides service planning information regarding the release of these systems into Fujitsu Computers Ltd existing range of personal computer systems.

Note: The information contained in this Service Planning Guide is correct at the time of publication, however, Fujitsu Computers Ltd reserve the right to amend or change the contents of this guide without prior notification.

<b>DOCUMENT NAME</b>	<b>ISSUE / VERSION</b>	<b>DATE</b>
SPG-B-48-158.DOC	3.0	25/08/99

This SPG may be updated.

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## 1.2 Hardware

### 1.2.1 Basic system units

	<b>B112</b>
Processor & speed	Intel Pentium Processor with MMX technology, 233 MHz
Internal cache of the processor	16 kB + 16 kB (data + code)
External clock	66 MHz
Co-processor	Built-in
Second level cache	512 kB, Pipeline Burst SRAM
Chip set	Intel 430TX, PIIX4E
On-board memory	32 MB SDRAM
Memory expansions	Max. 96 MB. 32 and 64 MB SDRAM DIMMs
Memory sockets	1
BIOS	512 kB Flash RAM, Phoenix NoteBIOS platform
APM support	Spec. version 1.2
ACPI support	Spec. version 1.0
Architecture	PCI local bus / ISA
Floppy drive	External 1.44 MB FDD
Hard disk interface	One PCI Enhanced IDE interface on the system board
CD-ROM drive	Optional external 20x-speed, PCMCIA adapter
IDE disk	3.2 GB
PCMCIA/CardBus controller	Ricoh RT5C475A, PCMCIA spec 2.1 and JEIDA 4.0 compliant
PCMCIA sockets	One type II slot, Card Bus
ZV-Port	Yes
Video controller	On-board PCI local bus, NeoMagic 128XD, 2 MB video RAM (EDO DRAM)
LCD	8.4" TFT Touchpanel screen, colour SVGA, 800*600 resolution
SimulScan	Yes
On-board audio	ESS ES1879 controller, Sound Blaster Pro compatible
Microphone	No
Speaker	2 built-in
Sound I/O	Head phone out, microphone-in, 3.5 mm connector.
Keyboard	Windows keys, 10 function keys, embedded numeric keypad
Pointing device	QuickPOINT

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External CRT	640x480, 16M colours, max 85Hz 800x600, 16M colours, max 85Hz 1024x768, 64k colours, max 75Hz
Power saving features	1. LCD and back light power off 2. HDD standby 3. Suspend mode & Save to disk 4. Battery low warning 5. Standby/suspend upon battery low
Serial port	One 16C550 compatible serial port with 9-pin male connector on Connector Box (With 16 byte FIFO)
SIR	IrDA 1.1 (max. 4 Mbps)
Parallel port	One standard bi-directional parallel port with 25-pin female connector on Connector Box (Output only, Bi-directional, ECP)
USB port	Two USB ports
PS/2 port	One PS/2 connector, HotPlug support, support only for PS/2 keyboard (no PS/2 mouse)
Primary battery	Li-Ion, 3200mAh
System unit dimensions	
Width	230 mm
Height	29 mm
Depth	170 mm
Weight	1.2 kg
Connector Box	
Width	230 mm
Height	24 mm
Depth	30 mm
Weight	130 g
AC-adapter	Auto-sensing, 100 - 240 V, 50 - 60 Hz
Width	60 mm
Height	25 mm
Length	105 mm
Weight	225g

## 1.2.2 Migration path

Fujitsu LifeBook B112 replaces the LifeBook B110.

## 1.2.3 Options available

PL090197	32 MB SDRAM
PL090204	64 MB SDRAM
PL090249	AC adapter
PL090268	Battery
PL090269	Battery table charger
PL090267	External 20x speed CD-ROM drive (Amacom)
PL090280	External 24x speed CD-ROM drive slimline (Archos)
PL090271	Connector box
PL090245	Auto/plane adapter

## 1.2.4 System software

Pre-Installed Operating System and applications:

Microsoft Windows 98  
Easy Guide PC Manual  
Last Minute Information  
Adobe Acrobat Reader  
F-Secure anti-virus  
PC Doctor for Windows  
TeamWare Crypto (diskettes)

**or**

Microsoft Windows NT 4.0  
Easy Guide PC Manual  
Last Minute Information  
Phoenix Power Panel  
Phoenix CardExecutive  
Phoenix NoteDock

## 1.3 Release time scales (estimated)

## 1.3 Release time scales (estimated)

Model	Approved For Shipment (AFS)	Identification
B112	wk 16	KS7

AFS = Approval For Shipment

Identification = The three (3) first digits of the structure code.

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## 1.4 Approvals

Approval type	Approval
Safety	EN60950; UL1950; CSA 22.2 No 950M89
RFI emission	EN55022 class B, FCC part 15, Class B

## 2 SERVICE OPERATIONS AND SPARE PARTS LOGISTICS

### 2.1 Reliability and manpower forecasts

Reliability and manpower forecasts are done for each LifeBook product family based on calculations and experience.

For more information please contact FUJITSU COMPUTERS LTD- Mobile Computing Division, Platform Development & Support. See contact details in chapter 2.4.

### 2.2 Software and tools

#### 2.2.1 Diagnostic software and Documentation

Recommended test and diagnostics software for the LifeBook B112 is ADP ver.4.204 Diagnostics Software. ADP is available from Genesis, EX0003711. In addition to manuals supplied as standard with each system, Service and Support Documentation will be available from Genesis.

Targeted availability date for documents is April 1999.

Document	Document number
PC Specialist's Handbook for LifeBook B110 and B112	TBA

Other test and diagnostics software packages may be used where applicable.

#### 2.2.2 Special Tools

A Phillips type (cross head) crew driver, size 01, is recommended.

#### 2.2.3. Utilities CD

The target is to have the Utility CD and boot diskettes included in each system box at the product release.

The Utility CD will contain all device drivers needed for complete Windows98 or Windows NT4.0 installation. It can be used for full or partial recovery. Utility CD is available in two different versions, one for Windows 98 and one for Windows NT 4.0. The boot diskette used to boot the system into DOS for recovery and



which provides a DOS driver for the external CD-ROM is common. Utilities and applications installed on pre-installation data will be included on the CD. Utility CDs will be available orderable separately through spare parts logistics.

## 2.3 Service Partner Program and Authorisation

FUJITSU COMPUTERS LTD have launched a comprehensive **Service Partner Program**, which includes a wide selection of advanced support activities for the FUJITSU COMPUTERS European Service Partner Network. For more information of becoming a FUJITSU COMPUTERS Authorised Service Partner, or for membership criteria and application forms, please contact your local FUJITSU COMPUTERS Trading Company or FUJITSU COMPUTERS – Mobile Computing Division, Platform Development & Support. See contact details in chapter 2.4.

## 2.4 Support routes

Resources for technical support should be used in the following order:

Service Engineers
Second line Support Experts Help Desk Providers, Regional Repair Centres, Authorised Service Partners
FUJITSU COMPUTERS LTD, Mobile Computing Division Platform Development & Support
Phone: + 44-1344-475273
Fax: + 44-1344-475987
ITN: 7263 5273

Mail address:

FUJITSU COMPUTERS LTD  
MOBILE COMPUTING SUPPORT  
Lovelace Road,  
Bracknell,  
Berkshire RG12 8SN  
United Kingdom

## 2.5 Training

Training courses which will include Lifebook B112 products will be available in April – May 1999 in a couple of European locations. Exact dates and locations are

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available from Mika Komppa (see contact details below).

Authorised Service Partners are required to participate in the regular FUJITSU COMPUTERS technical training sessions (which is a conditional part of Authorisation) for second line specialists. Authorised Service Partners are expected to organise the training of first line engineers internally within their operation.

Only engineers who have been trained on FUJITSU LifeBooks, are authorised to perform Warranty Services on FUJITSU LifeBook products.

Contact International Technical Training, Mika Komppa, concerning availability and schedules for training events and PC Multimedia CDs relating to FUJITSU Personal Computers.

Email: Internal: KOMPPA MIKA (mail server FIN1701)  
Internet: mika.komppa@fujitsu.fi

Phone: Internal: 7676 6625  
External: + 358-9-5696625  
Fax: + 358-9-5696609

## 2.6 LifeBook Warranty Term's and Conditions, Warranty Repair Service

FUJITSU LifeBook end user **Warranty Terms and Conditions** are included in each LifeBook product. Warranty Service instructions for Authorised Service Partners, Help Desk Providers and Regional Repair Centres are detailed in the '**Fujitsu Computers Warranty Service Manual for LifeBook products.**' **LifeBook standard Warranty Service will be undertaken only at the Regional Fujitsu LifeBook Repair Centres. Non-authorized Repair, or attempted Repair, will invalidate FUJITSU Warranty.**

In case of a hardware problem during Warranty period Fujitsu LifeBook end users are advised to contact the Fujitsu LifeBook Help Desk (Local or International) for assistance. End users may also contact Authorised Service Partners. In case of an end user LifeBook Warranty call, Authorised Service Partners should advise the end user to contact the local Fujitsu LifeBook Help Desk for assistance and advice.

Authorised Service Partners are allowed to provide following services for Lifebook products:

- Top-up maintenance services during the Warranty period, only if separately authorised by Fujitsu Help Desk
- Non warranty and after warranty repairs

## 2.7 Warranty reimbursement rules and practices

Authorised Service Partners are entitled to claim compensation for FUJITSU LifeBook Warranty Call Handling and for Top-up Warranty Service, but only by Help Desks authorisation.

Where Service Partners are authorised to perform Warranty Service, Partners are entitled to receive parts and labour compensation only when returning the faulty parts with a completed PRF (Parts Return Form) back to The FUJITSU COMPUTERS Regional Repair Centre.

Reimbursement processes and rates may vary from country to country and are subject to review and revision as detailed in the FUJITSU COMPUTERS **Warranty Processes Manual for LifeBook products**, and in the attachments thereof.

## 2.8 Spare parts supply

FUJITSU LifeBook Spare Parts are covering all the major details in LifeBook products and are service friendly single packed, provided with Part number, related bar code and description.

Spare Parts, listed in Appendix C, are available for Top-up and out of Warranty repair from FUJITSU COMPUTERS Regional Repair Centres (see Appendix A). Spare Part Price Lists are updated on a quarterly basis and are available from the Spares Operations based in Finland.

Spare Part Order Process is described in a separate document; **FUJITSU Computers Warranty Processes Manual for LifeBook products**.

Should you have any inquiries concerning Spare Part availability, please contact your Regional Repair Centre.

## 2.9 Reference products

FUJITSU COMPUTERS require that Regional Repair Centres and Help Desk Providers maintain a set of the latest LifeBook Reference Products, which are to be used by the Repair Centres and Help Desks Second line support for problem analysis and reproduction. Appendix B details recommended Reference Products applicable to LifeBook B112.

For further details concerning Price and Conditions on Reference Products please contact LifeBook Support, Mobile Computing Division. Details as in chapter 2.4.

APPENDIX A.

## **0. REGIONAL FUJITSU LIFEBOOK REPAIR CENTER CONTACT INFORMATION:**

### **0.1. REGION 1: SWEDEN, NORWAY, DENMARK, BALTIC AREA COUNTRIES, BELGIUM, LUXEMBOURG, UNITED KINGDOM, IRELAND, PORTUGAL, ITALY, FRANCE AND ROW**

TeliService AB

Address: Låsblecksgatan 7  
S-582 70 Linköping  
SWEDEN

Telephone: + 46 (0)13 202400

Fax: + 46 (0)13 202420

Contact: Kjell Johansson

### **0.2. REGION 2: HOLLAND**

MSO

Address: Industrieweg 18  
3430 BK Nieuwegein  
HOLLAND

Telephone: 0900-2025119 (From outside Holland: + 31-30-6027380)

Contact: Lisa Nap ([Lisa@mso.com](mailto:Lisa@mso.com))

### **0.3. REGION 3: UNITED KINGDOM**

Celestica Limited

Address: Bradwell Wood  
Longbridge Hayes  
Longport  
Stoke-on-Trent  
Staffordshire ST6 4PB

Contact: Richard Bevan

### **0.4. REGION 4: GERMANY, AUSTRIA, SWITZERLAND AND EASTERN EUROPE**

Fujitsu Computers GmbH

Address: Rheinmetalstrasse 18  
D-99610 Sömmerda  
Germany

Telephone: + 49 (0) 3634 330 264

Fax: + 49 (0) 3634 330 451

E-mail: N/A

Contact: Frank Schmeissner

## **0.5. REGION 5: FINLAND**

PowerMill Oy (on behalf of ICL Data Services)

Address: Valimotie 14  
00380 Helsinki  
Finland

Telephone.: + 358 (0) 9 561 86161 + 358 (0) 9 561 86162

Fax: + 358 (0) 9 561 86100 + 358 (0) 9 561 86100

Contact: Jari Hyvärinen Kyösti Suutari

## **0.6. REGION 6: ISRAEL**

Yanir Systems Ltd

Address: 39 David Navon St.  
Magshimim 56910  
Israel

Telephone: + 972 3 933 1325

Fax: + 972 3 933 1204

E-mail: yanirsys@netvision.net.il

Contact: Yuval Ben-Ner

## **0.7. REGION 7: SPAIN (OPERATIONAL FROM 01/09/99)**

Fujitsu ICL Espana SA

Address: Pol. Ind. Guadalhorce – C/. Cesar Vallejo, 16  
29004 Malaga  
SPAIN

Telephone: + 34 95 213 30 24

Fax: + 34 95 213 31 04

Contact: Juan Racero

### APPENDIX B.

#### 1. REFERENCE KITS

As a recommended reference kit is LifeBook B112, including 32 MB RAM, 3.2 GB HDD, TFT Touchpanel screen, connector box, external floppy disk drive and external CD-ROM. Windows 98 as pre-installed operating system.

Structure code for LifeBook B112 is KS734315yx1z, where xyz corresponds to keyboard layout (x), language (y) and mains cable (z) according to following lists:

#### **X - keyboard layout code:**

- 1 = English (UK)
- 2 = Finnish / Swedish
- 3 = Norwegian
- 4 = Danish
- 5 = German
- 6 = French
- 7 = Dutch / English (USA)
- 8 = Portuguese
- 9 = Spanish
- A = Belgian
- B = Switzerland
- C = Italy
- D = Hungarian
- H = Hebrew

#### **Y - language code:**

- E = English
- F = Danish
- G = German
- H = Spanish
- J = French
- K = Dutch
- L = Norwegian
- M = Finnish
- N = Swedish
- P = Portuguese
- V = Czech
- A = Hungarian
- S = Italian
- Y = Polish
- 4 = Hebrew

#### **Z - mains cable:**

- 1 = Euro cable
- 2 = UK cable
- 3 = US cable

### APPENDIX C

#### SPARE PARTS LIST

<b>Part No</b>	<b>Substitute</b>	<b>Description</b>
CP000604-XX		B112 System board
CA20341-B87X		CPU board
AF33293	PL090197	32MB DIMM SDRAM
AF33295	PL090204	64MB DIMM SDRAM
CA01678- B940000G		3.2 GB HDD (Fujitsu)
CP000622-XX		HDD flat cable
AF22142		External 3.5" FDD
AF23361	PL090267	Optional external 20x CD-ROM (Amacom)
PL090280		Optional external 24x slimline CD-ROM (Archos)
AF81090		AC adapter
CA54200-0472	A4700898	Li-Ion battery, 3200mAh
A4700889		Battery charger, option
CP003735-XX		CMOS battery
CP003761-XX		Inverter unit
CP000630-XX		Inverter cable
CA51001-0248		8.4" TFT touch panel (Fujitsu)
CA51002-5010		Pen for touch panel
CP003770-XX		Pen holder assembly
CP003759-XX		LCD back cover assembly with slot for pen
CP003754-XX		LCD front assembly with slot for pen
CP003461-XX		LCD cover hook
CP003510-XX		LCD cover hook spring
CP003551-XX		Hinge left
CP003550-XX		Hinge right
CP003605-XX		LCD cover rubber foot, upper
CP003607-XX		LCD screw cover sticker, lower
CP000624-XX		Audio cable (flat, with connectors)
CP000632-XX		Speaker Unit.
CP003600-XX		Speaker holder, left
CP003601-XX		Speaker holder, right
CP003387-XX		Pointing device
CP003388-XX		Pointing device, cap
CP003509-XX		Pointing device, metal holder
CP000626-XX		PS/2 port flat cable assembly
CP000608-XX		DC-in PCB
CP000636-XX		Status LCD flat cable

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CP000655-XX	Status LCD assembly
CP003711-XX	Lower cover assembly
CP003720-XX	Upper cover assembly
CP003429-XX	Mouse buttons assembly
CP000628-XX	Mouse buttons cable
CP003428-XX	Main switch
CP003431-XX	IrDA lens cover
CP003602-XX	USB port cover
CP003716-XX	Heat sink
CP003425-XX	DIMM cover
CP003724-XX	PC Card slot flap
CP003723-XX	Back connector cover
CP003722-XX	Hinge cover assembly
PL09A270	Connector box, whole assembly
CP003482-XX	Connector box upper mechanics
CP003782-XX	Connector box lower mechanics
CP003783-XX	Connector box, mounting screw
CP000606-XX	Connector box PCB
A8910033	Y-cable for external KB and mouse
PK040921	Keyboard UK
PK040922	Keyboard FIN/SWE
PK040924	Keyboard DEN
PK040925	Keyboard GER
PK040926	Keyboard FRA
PK040927	Keyboard USA/NL
PK040929	Keyboard SPA
PK040930	Keyboard BEL
PK040931	Keyboard SWI
PK040936	Keyboard CZE
PK040937	Keyboard HEB
SL00313UA	B112 Utility CD for Windows98
SL00315UA	B112 Utility CD for Windows NT4.0